



POWER OF ATTORNEY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Lai et al. Confirmation No.: 1097
Application No.: 10/723,621 Art Unit: 2816
Filed: November 25, 2003 Examiner: To be assigned
For: MUTILEVEL CONVERTER BASED Attorney Docket No.: 060825-0334-US
INTELLIGENT UNIVERSAL
TRANSFORMER

**POWER OF ATTORNEY BY ASSIGNEE
AND EXCLUSION OF INVENTOR(S) UNDER 37 C.F.R. 3.71
WITH STATEMENT UNDER 37 C.F.R. 3.73(b)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The undersigned assignee of the entire interest in the above-identified subject application hereby appoints Morgan, Lewis & Bockius LLP, customer no. 24341 as its attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, said appointment to be to the exclusion of the inventors and their attorney(s) in accordance with the provisions of 37 C.F.R. 3.71, provided that, if any one of these attorneys ceases being affiliated with the law firm of Morgan, Lewis & Bockius LLP as partner, counsel, or employee, then the appointment of that attorney and all powers derived therefrom shall terminate on the date such attorney ceases being so affiliated.

Please direct all correspondence for this application to customer no. 24341.

I am the:

- ☐ Applicant/Inventor
☒ Assignee of record of the entire interest. See 37 CFR 3.71.
(Statement under 37 CFR 3.73(b) is applicable)

Statement Under 37 C.F.R. 3.73(b)

Electric Power Research Institute, Inc. states that it is:

- ☒ the assignee of the entire right, title, and interest; or
☐ an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is %

in the patent application/patent identified above by virtue of either:

- ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office on _____ at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office on
at Reel , Frame , or for which a copy thereof is attached.

2. From: To:
The document was recorded in the United States Patent and Trademark Office on
at Reel , Frame , or for which a copy thereof is attached.

3. From: To:
The document was recorded in the United States Patent and Trademark Office on
at Reel , Frame , or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☐ Copies of assignments of other documents in the chain of title are attached.
[Note: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

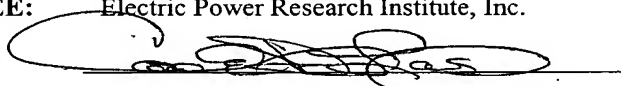
The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date:

5/17/04

ASSIGNEE: Electric Power Research Institute, Inc.

Signature:



Typed Name: Carole Drahan-Larsen

Position/Title: Associate General Counsel, IP

Address: 3412 Hillview Avenue
Palo Alto, CA 94303

COPY**ASSIGNMENT**

WHEREAS, WE, Jih-Sheng Lai, a citizen of the United States of America residing at 2204 Hardwick Street, Blacksburg, Virginia 24060, Arshad Mansoor, a citizen of the United States of America residing at 38 Palisades Parkway, Oak Ridge, Tennessee 37830, Arindam Maitra, a citizen of India residing at 5506 Crooked Pine Lane, Knoxville, Tennessee 37921 and Frank Goodman, a citizen of the United States of America residing at 4236 Lorabelle Court, Palo Alto, California 94306, ASSIGNORS, are the inventors of the invention in MULTILEVEL CONVERTER BASED INTELLIGENT UNIVERSAL TRANSFORMER for which we have executed an application for a Patent of the United States

- ☐ which is executed on ☐ even date herewith or ☐
- ☒ which is identified by Morgan, Lewis & Bockius LLP docket no. 060825-0334-US
- ☒ which was filed on November 25, 2003, Application No. 10/723,621
- ☐ We hereby authorize and request our attorney, , of Morgan, Lewis & Bockius, LLP, to insert here in parentheses (Application number, _____ filed _____) the filing date and application number of said application when known.

and WHEREAS, Electric Power Research Institute, Inc., ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date April 26, 2004 Jih-Sheng Lai L.S.
 State of VA)
 County of Montgomery) SS.:

On April 26, 2004, before me, Katrina K. Flory Notary Public, personally appeared Jih-Sheng Lai, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Katrina K. Flory My Comm exp 11/30/04

Date _____, 2004 _____ L.S.
 State of _____)
 County of _____) SS.:

On _____, 2004, before me, _____, Notary Public, personally appeared Arshad Mansoor, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

ASSIGNMENT

WHEREAS, WE, Jih-Sheng Lai, a citizen of the United States of America residing at 2204 Hardwick Street, Blacksburg, Virginia 24060, Arshad Mansoor, a citizen of the United States of America residing at 38 Palisades Parkway, Oak Ridge, Tennessee 37830, Arindam Maitra, a citizen of India residing at 5506 Crooked Pine Lane, Knoxville, Tennessee 37921 and Frank Goodman, a citizen of the United States of America residing at 4236 Lorabelle Court, Palo Alto, California 94306, ASSIGNORS, are the inventors of the invention in MULTILEVEL CONVERTER BASED INTELLIGENT UNIVERSAL TRANSFORMER for which we have executed an application for a Patent of the United States

- ☐ which is executed on ☐ even date herewith or ☐
- ☒ which is identified by Morgan, Lewis & Bockius LLP docket no. 060825-0334-US
- ☒ which was filed on November 25, 2003, Application No. 10/723,621
- ☐ We hereby authorize and request our attorney, , of Morgan, Lewis & Bockius, LLP, to insert here in parentheses (Application number, _____ filed _____) the filing date and application number of said application when known.

and WHEREAS, Electric Power Research Institute, Inc., ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date _____, 2004 _____ L.S.
Jih-Sheng Lai

State of _____)
) SS.:
County of _____)

On _____, 2004, before me, _____, Notary Public, personally appeared Jih-Sheng Lai, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

at Knoxville, Tennessee, Celia Townsend Williams
Date May 5, 2004 _____ L.S.
Arshad Mansoor

State of Tennessee)
) SS.:
County of Knox)

On May 5, 2004, before me, Celia Townsend Williams, Notary Public, personally appeared Arshad Mansoor, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. my commission expires 02/04/08

State of)
) SS.:
County of)

Figure 1 illustrates the experimental setup. A participant is seated at a table, looking at a screen. On the screen, there is a starting point (a large circle) and a target (a small circle). A horizontal line connects the starting point to the target. A vertical line segment is shown below the horizontal line, representing the distance from the starting point to the target. The diagram is labeled with 'Participant', 'Target', 'Starting Point', and 'Distance'.

State of)
) SS.:
County of)

[illegible]

On _____, 2004, before me, _____, Notary Public, personally appeared Arshad Mansoor, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

at Knapoli, Tennessee Gelia Townsend Williams

Date May 5, 2004

Arindam Maitra

L.S.

State of Tennessee)

County of Knox)

) SS.:

On May 5, 2004, before me, Gelia Townsend Williams, Notary Public, personally appeared Arindam Maitra, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. my commission expires 02/04/08

WITNESS my hand and official seal

Date _____, 2004

Frank Goodman

L.S.

State of _____)

County of _____)

) SS.:

On _____, 2004, before me, _____, Notary Public, personally appeared Frank Goodman, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

ASSIGNMENT

WHEREAS, WE, Jih-Sheng Lai, a citizen of the United States of America residing at 2204 Hardwick Street, Blacksburg, Virginia 24060, Arshad Mansoor, a citizen of the United States of America residing at 38 Palisades Parkway, Oak Ridge, Tennessee 37830, Arindam Maitra, a citizen of India residing at 5506 Crooked Pine Lane, Knoxville, Tennessee 37921 and Frank Goodman, a citizen of the United States of America residing at 4236 Lorabelle Court, Palo Alto, California 94306, ASSIGNORS, are the inventors of the invention in MULTILEVEL CONVERTER BASED INTELLIGENT UNIVERSAL TRANSFORMER for which we have executed an application for a Patent of the United States

- ☐ which is executed on ☐ even date herewith or ☐
- ☒ which is identified by Morgan, Lewis & Bockius LLP docket no. 060825-0334-US
- ☒ which was filed on November 25, 2003, Application No. 10/723,621
- ☐ We hereby authorize and request our attorney, , of Morgan, Lewis & Bockius, LLP, to insert here in parentheses (Application number, _____ filed _____) the filing date and application number of said application when known.

and WHEREAS, Electric Power Research Institute, Inc., ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date _____, 2004

Jih-Sheng Lai L.S.

State of _____)
) SS.:
County of _____)

On _____, 2004, before me, _____, Notary Public, personally appeared Jih-Sheng Lai, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Date _____, 2004

Arshad Mansoor L.S.

State of _____)
) SS.:
County of _____)

On _____, 2004, before me, _____, Notary Public, personally appeared Arshad Mansoor, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Date _____, 2004

Arindam Maitra

L.S.

State of _____)
) SS.:
County of _____)

On _____, 2004, before me, _____, Notary Public, personally appeared Arindam Maitra, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal

Date April 23, 2004

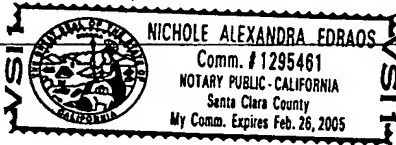
Frank Goodman

L.S.

State of California,
County of Santa Clara SS.:

On April 23, 2004, before me, Nichole Alexandra Edraos, Notary Public, personally appeared Frank Goodman, personally known to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal



Nichole Alexandra Edraos